

REMARKS

According to a final Office Action, claims 1-20 are pending in the Application and these same claims stand rejected. Specifically, claims 1-2, 6, 8-15, and 17-20 are rejected under 35 U.S.C. § 103(a) as allegedly unpatentable by U.S. Patent No. 6,178,503 (Madden et al.) in view of Multiple Bootable Operating Systems of IBM technical Disclosure Bulletin, June 1, 1992, pp. 1-4 (IBM). Claims 3-5, and 16 are rejected under 35 U.S.C. § 103(a) as allegedly unpatentable by Madden et al. in view of IBM and further in view of U.S. Patent No. 5,367,628 (Ote et al.). Finally, claim 7 is rejected under 35 U.S.C. § 103(a) as allegedly unpatentable by Madden et al. in view of IBM, and further in view of U.S. Patent No. 5,850,471 (Brett).

The Applicants respectfully ask that the Examiner contact the undersigned at 206-903-2461 to discuss any remarks made below should the current grounds for rejection be maintained or new grounds for rejection be introduced with regard to claims 1-20 pending in the present application.

The present amendments to the claims were made in order to place the claims in better condition for allowance. The newly added claims, 21-34, further recite subject matter originally disclosed in the application. Moreover, the remaining amendments fix any antecedent basis and other cosmetic issues. Lastly, the amendments to the specification have direct support on p. 13, ll. 24-27. No new matter has been added.

Telephonic Conference, August 28, 2006

On August 28, 2006, the undersigned conducted a telephonic conference with the Examiner. During this conference, the patentability of claim 1 was discussed, along with claims 4 and 5. Additionally, claim 11 was also briefly discussed, however, no agreement was reached. The Examiner suggested that the undersigned focus on the IBM reference in combination with Madden et al.

The Applicants and the undersigned thank the Examiner for his helpful remarks, and willingness to discuss the pending subject matter.

Claim Rejections Under 35 U.S.C. § 103(a)

As the Applicants have already mentioned in the last remarks, dated April 25, 2006, Madden et al. discloses the selection of one operating system *at boot time*. While it is true that Madden et al. discloses “managing multiple operating systems in a single computer” (col. 3, ll. 30-31), the multiple operating systems are merely *stored* on the single computer, and only *one* such operating system runs as selected *at boot time* (as opposed to, say, *runtime*, where multiple operating systems might be running). In a nutshell, Madden et al. discloses selecting via a bitmap enabled graphical user interface (GUI) one operating system from multiple operating systems stored on a hard drive: “Boot management includes organizing operating systems and allowing users to select which operating system [note the use of the singular “system” not “systems”]” (col. 3, ll. 40-41) “Because there are more operating systems than the computer can boot and run *at one time*, a user *must* select *between* operating systems *at boot time*” (col. 3, ll. 46-48) (emphasis added).

Madden et al. does not disclose the notion of emulation or virtualization. In fact, it does just the opposite, by allowing only one operating system to run at a time, and a selection of such a system is made at boot time. Thus, it is incorrect to conclude, that “Madden implies that there are at least two operating systems [that] are *emulated* at thumbnail icons shown in fig. 6....” (Office Action, p. 6-7) (emphasis added). All Madden et al. does is *show* via a bitmap GUI that one can select at boot time one operating system from various operating systems stored on a hard drive. But, the concept of emulation or virtualization is not supported at all by Madden et al.

To remedy the shortcoming of Madden et al., the Examiner cites the IBM reference, which talks about virtual machines (VM) in general terms. The Examiner’s argument amounts to the following: A system that excludes emulation or virtualization, where this system has a bitmap GUI for the selection of only one OS at boot time for sole execution, combined with the broad notion of virtualization and emulation disclosed by IBM, allegedly renders the recited subject matter obvious.

In contrast, claim 1, for example, recites:

1. A computer system for running one or more software applications, wherein the software applications are suitable for generating a video output, the computer system comprising:

a host operating system suitable for displaying a graphical user interface; multiple operating systems running in environments emulated by one or more emulator programs running on the host operating system; and wherein the host operating system is able to display a reduced-size representation of the video output of at least one operating system from the *multiple operating systems that are being operated in a background mode.*

(claim 1). For example, focusing on the last limitation, it becomes apparent why the cited art cannot render claim 1 unpatentable: “wherein the host operating system is able to display a reduced-size representation of the video output of at least one operating system from the *multiple operating systems that are being operated in a background mode.*” (emphasis added). The combination of Madden et al. and the IBM reference cannot yield such a system for multiple operating systems being operated.

Thus, claim 1 is patentable for at least this reason, but it patentable for other reasons as well. For instance, it recites that “the host operating system is able to display a reduced-size representation of the *video output* of at least one operating system....” The IBM reference does not address this limitation, and Madden et al. merely discloses *bitmap* images. These bitmap images in menu 604 are generated before an operating system is even started, so it is impossible for it to be a video output of the corresponding operating system (or any other kind of image output that is not pre-generated before an operating system is even started).

Thus, since neither Madden et al. nor IBM suggest anywhere a “reduced-size” “representation” of “video output” (which is distinct from bitmap images), and since the combination of a non-emulating / non-virtualizing system (Madden et al.) with a “serial” virtualizing system (IBM) is contradictory, claim 1 patentably defines over the cited art. Claim 8 recites similar limitations, and thus patentably defines over the cited art for similar reasons.

Next, turning to claims 11 and 12, representative claim 11 recites:

A method for displaying a reduced-size images of multiple computer systems running in virtual machine environments, said method comprising the steps of:

suspending one or more of the multiple computer systems by saving to memory in a host computer system the image of each of the suspended computer systems;

reading in at an emulator program from memory in the host computer system the images of the suspended computer systems;

interpreting in the emulator program the contents of saved images of the suspended computer systems; and

displaying reduced-size representations of the suspended computer systems.

This claim recites, for example, the limitation of “interpreting in the emulator program the contents of saved images of the suspended computer systems.” The Specification sheds further light on this limitation: For example, “[i]nterpreting the virtual machine’s VRAM involves taking into account the video mode or video adapter setting of the virtual machine at the time it was suspended...” (Specification, p. 12, ll. 2-3).

In the Office Action, at p. 5, the Examiner cites col. 9, l. 37 – col. 10, l. 4 as allegedly meeting this limitation. This passage from Madden et al. simply discloses:

[T]he ability to list the same operating system multiple times in the file 134. This provides support for different operating system modes using switches, environment variables, or execution environment parameters, as well as support for different versions or instances of a given operating system.

The Applicants contend that this passage does not disclose the recitation of “interpreting in the emulator program the contents of saved images of the suspended computer systems” (claim 11). No reference in the above Madden et al. passage is made to such “interpreting” of “contents” of a “saved” image of a “suspended” emulated computer system. Claim 12, moreover, recites similar subject matter and is therefore allowable for similar reasons.

Dependent claims 2-7, 9-10, and 13-16, 18-20, directly or indirectly depend from claims 1, 8, 11, and 12, respectively, and therefore are also believed allowable for the same reasons.

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Withdrawal of the rejection under § 103(a) is therefore earnestly solicited. Moreover, the Applicants have also added new claims 21-34 that define over Madden et al. and the IBM reference for similar reasons to that of claims 1-16 and 18-20.

CONCLUSION

Applicants believe that the present Amendment is responsive to each of the points raised by the Examiner in the Official action, and submits that Claims 1-16 and 18-34 of the application are in condition for allowance. Favorable consideration and passage to issue of the application at the Examiner's earliest convenience is earnestly solicited.

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